

Taxonomy

Electrochemical Models



PDE Grounded

ECM/Phenomenological



Electrical Components

Data-Driven/Black Box



ANN & Fuzzy Logic

SOC Estimation & Battery Dynamics Modeling

ECM

KiBaM

Pros

simulating the transient
response of the terminal
voltage

Cons

inability to explain the
non-linear recovery effect

Pros

explaining the diffusion-
limited recovery effect &
Peukert's Law

Cons

inability to output the
terminal voltage directly

***Mainstream
Approaches***